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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,687	11/24/2003	Pierre Blouin	LUP-106	8298
7590 06/02/2005			EXAMINER	
LORUSSO, LOUD & KELLY, LLP 15 RYE STREET SUITE 312 PORTSMOUTH, NH 03801			NGUYEN, TRAN N	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No. 10/722,687	Applicant(s) BLOUIN ET AL.	
	Examiner Tran N. Nguyen	Art Unit 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-43 is/are pending in the application.
4a) Of the above claim(s) 41 and 42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-6, 10, 12-22, 29-38 and 42 is/are rejected.
- 7) ☐ Claim(s) 7-9, 11, 23-28 and 39-41 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0704</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED OFFICE ACTION

Election/Restriction

1. Applicant's election of claims 1-42 on 4/23/05 is acknowledged. Since Applicant did not provide any traversal arguments to the restriction requirement, the response is considered as election without traverse; therefore, the election/restriction is made FINAL.

Claim Rejections - 35 USC § 112

2. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 2, the "XX degrees" is indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-6, 10, 12-22, 37-38 and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Taji et al (US 6,441,527)** in view of **Berger (US 5,637,943)** and **Abukawa et al (USP 6,335,582)**.

Regarding claims 1, 3-6, 10, 12-14, 22, 32, 35, 37-38 and 42, Taji discloses a dynamoelectric machine stator core (1-3) for receiving a stator winding, said stator core comprising:

a core body defining a pair of axially opposed core end surfaces and a substantially cylindrical core main peripheral surface extending between said core end surfaces,

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a plurality of substantially axially extending stator slots circumferentially spaced in said core body, said stator slots defining intervening teeth projecting substantially radially towards said core main peripheral surface; each of said stator slots extending radially from a corresponding slot base to said core main peripheral surface.

Taji substantially discloses the claimed invention, except for the following limitations:

Each of the slot is configured as follows:

- *a slot first section extending radially from said slot base to a slot intermediate radial position located intermediate said slot base and said core main peripheral surface;*
- *a slot second section extending radially from substantially adjacent said slot intermediate radial position towards said core main peripheral surface;*
- *said slot first and second sections communicating with each other and being in a circumferentially offset relationship relative to each other,*
particularly,
- *each of said stator slots further defines a slot intermediate section extending between said slot first and second sections, said slot intermediate section extending substantially at an angle relative to said slot first and second sections, the intermediate section is defined by a groove (52) or recess (54)*

Berger, however, teaches a magnetic core (fig 1) having a plurality of slots for accommodating conductors therein. Berger teaches that in order to improve fitting the conductor in the slot to reduce imbalance therein is divided into at least two zones by the groove and recess alternately displaced in and against the direction of the slot, so that the width of the tooth, between two neighboring grooves, remains the same over the entire height of the groove, but the fitting of the conductor is improved. As shown in fig 1 of Berger, the slots are divided into plural sections

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communicating with each other and being in a circumferentially offset relationship relative to each other, and each of said slots further defines a slot intermediate section extending between said slot first and second sections, slot intermediate section extending substantially at an angle relative to said slot first and second sections' walls (7, 8) respectively, the intermediate section is defined by a groove and recess (fig 1). Those skilled in the art would understand that even though Berger teaches a rotor core instead of a stator core. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, generally the Berger's disclosure is read as a magnetic core having the specific slots divided into sections that circumferentially offset in relationship for the purpose of improving the fitting and winding process of the conductors being accommodated within the slots.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the stator core by configuring the stator slot to have plural slot sections, at least two slot sections, wherein the sections that circumferentially offset in relationship via an intermediate sections formed by an angled groove or recess, as taught by Berger. Doing so would facilitate the winding process of the conductors, as well as improve the fitting of the conductor being accommodated within the slots.

Regarding claims 15-21, 29-31, 33-34 and 36, with the limitations of the following:

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- *a retaining means operatively coupled to at least one of said stator slots for radially retaining corresponding stator winding sections therein; retaining means includes a retaining plate;*
- *slot defines retaining segments having a retaining grooves formed therein for receiving and securing a peripheral portion of said retaining plate.*

In other words, each of the slots having two grooves segments formed in the slot walls at the outer peripheral opening portions of the slot in order to accommodate a retaining plate, i.e., slot closer, to close the slot and to supportly retains the winding there within.

Abukawa, however, teaches a stator core having a plurality of slots (fig 2-3), wherein the stator winding (5) is accommodated within the stator slot, retaining plate (13), wherein the retaining plate (13) having two functions to prevent the stator windings (5) from falling down and to electrically insulate the stator winding (5). More, specifically, each of the stator slot is configured with two grooves (42a, 42b) on the opposite sides at the end portion of the stator slot's opening portion, as shown in FIG. 3. The sectional shape of each stator slot is formed such that the slot with the grooves (42a, 42b) to mechanically secure the retaining plate (13).

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the stator core by configuring the stator slots, each of which is formed with two grooves on the opposite side walls, at the end portion where the slot opening section, and the stator is provided with retaining plate for each slot, wherein the retaining plate is positioned and secured by the grooves, as taught by Abukawa. Doing so would provide a retaining plate to not only prevent the stator windings from falling down and to electrically insulate the stator winding,

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as well as to ensure the retaining plate itself is secured in place via the grooves in order to improve the structure integrity of the stator.

Regarding claim 2 reciting the offsetting angle is "XX degrees", it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the stator offset slot portions so that the *offsetting angle is "XX" degrees*, because it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Allowable Subject Matter

Claims 7-9, 11, 23-28, and 39-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

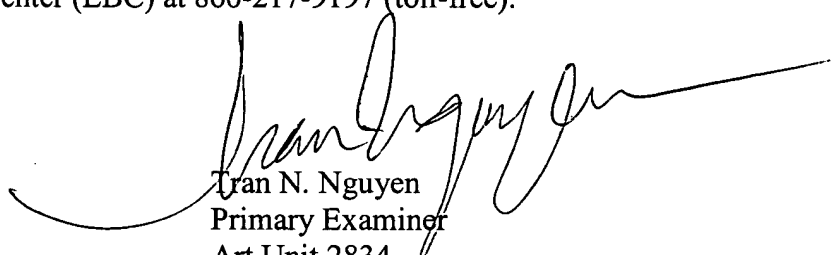
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is (571) 272-2030. The examiner can normally be reached on M-F 7:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tran N. Nguyen
Primary Examiner
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